

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 01-235848

(43)Date of publication of application : 20.09.1989

(51)Int.Cl.

G01N 29/04

(21)Application number : 63-061943

(71)Applicant : KAWASAKI STEEL CORP

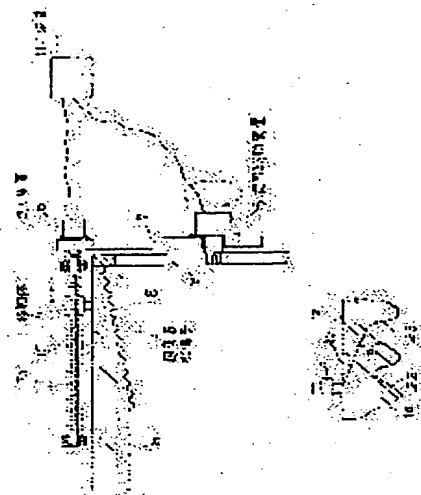
(22)Date of filing : 17.03.1988

(72)Inventor : FUJITA TSUTOMU

**(54) METHOD AND APPARATUS FOR ULTRASONIC FLAW DETECTION OF SCREW THREAD IN JOINT PART OF PIPE****(57)Abstract:**

**FIELD OF THE INVENTION:** To easily and surely detect the presence or absence of a defect in the screw threads in the joint part of a pipe by detecting the presence or absence of a reflection echo while spirally moving an ultrasonic probe by directing the emission beam thereof toward the base direction of the screw threads.

**CONSTITUTION:** The ultrasonic probe 3 is mounted to one end of a moving body 4 screwed to the screw threads 10 so as to come into contact with the surface of the outside cylinder of an internal thread part 1a. A swiveling driving device 5 and a feeder 6 are controlled by an NC (numerical control) device 11. The moving body 4 is spirally moved on the outside cylindrical surface of the internal thread 1a in such a manner that the emission beam from the probe 3 moves along the thread base of the internal thread 1a by the cooperative movements of these devices. The mounting position of the probe 3 and the directing direction of the emission beam are previously so determined that the angle  $\theta$  between the side face 22 of the thread ridge and the incident direction of the emission beam 20 of the probe 3 attains  $\leq 80^\circ$  ( $\geq 10^\circ$  inclination in the direction orthogonal with the side face 22 of the thread ridge). The emission beam from the probe 3 reflects at the defect 12 of the thread face and the reflected beam is received by the probe 3, by which said beam is detected as the defect echo.

**LEGAL STATUS**

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

2/09/2004

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office